



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,014	07/10/2001	Wei-Sing Chu	2313-116	8862

6449 7590 08/23/2005

ROTHWELL, FIGG, ERNST & MANBECK, P.C.
1425 K STREET, N.W.
SUITE 800
WASHINGTON, DC 20005

EXAMINER

YANG, NELSON C

ART UNIT PAPER NUMBER

1641

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/901,014	Applicant(s) CHU, WEI-SING	
	Examiner Nelson Yang	Art Unit 1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 70 and 72-79 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 70 and 72-79 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment of claim 70 is acknowledged and has been entered.
2. Claims 70 and 72-79 are pending.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 70, 72, 73, 75-78 are rejected under 35 U.S.C. 102(b) as being anticipated by Delannoy et al [US 5,284,144].

With respect to claims 70, 72, 73, Delannoy et al teach a system comprising a HT applicator comprising piezoelectric applicators (transducer) that transmit ultrasound radiation (column 8, lines 10-30), and a radiofrequency coil (generator) which permits the control of the amount of radiant energy, such as that due to ultrasound radiation, transmitted by the HT applicator (column 4, lines 45-50) and a microcomputer (CPU) that regulates the output of the HT applicator (column 10, lines 60-65). Delannoy et al further teach MRI probes for controlling the amount of radiant energy transmitted (column 7, lines 37-47) and standard probes for monitoring temperature (column 11, lines 25-36). Delannoy et al also teach a power meter for monitoring forward and reflected power from the HT applicator (column 13, lines 23-30).

The limitation that the CPU adjusts a frequency or an intensity of said ultrasound in response to signals from the first and second sensors to regulate the ultrasound generator and adjusts a frequency or intensity of ultrasound in response to the signals from the first and second sensors is regarded as a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963). With respect to claims 75-76, the MRI probe measures temperature and feeds the information to the microcomputer and regulates the output of the HT applicator (column 10, lines 55-65).

5. With respect to claims 77-78, the HT applicator can generate ultrasound radiation of about 0.1 to 20 MHz (column 8, lines 25-30).

6. With respect to claim 79, the HT applicator can produce ultrasound of a power of up to 300 W (column 15, example 11).

7. Claims 70, 72-79 are rejected under 35 U.S.C. 102(b) as being anticipated by Northrup et al [US 5,639,423].

With respect to claim 70, Northrup et al teach ultrasonic Lamb-wave devices (abstract) comprising a reaction chamber equipped with a Lamb-wave transducer (ultrasound generator) (column 7, lines 29-35) and Lamb-wave sensor (ultrasound sensor), where the transducer is located on a thin film wall of the chamber (claims 1, 3). Northrup et al further teach temperature

Art Unit: 1641

is monitored by measurement of the resistance of polycrystalline layers (column 9, lines 59-64), and also teach sensors for measuring density and viscosity (column 11, lines 40-48). Northrup et al also teach a power source/control system (fig.1, column 6, lines 53-63) for controlling the reaction, either by inductive coupling, capacitive coupling, or by electromagnetic coupling. Detection signals may be processed and stored by integrated microelectronic devices so that result interpretation and control mechanisms which may utilize feedback can be integrally contained (column 4, lines 40-45).

The limitation that the CPU adjusts a frequency or an intensity of said ultrasound in response to signals from the first and second sensors to regulate the ultrasound generator and adjusts a frequency or intensity of ultrasound in response to the signals from the first and second sensors is regarded as a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963). With respect to claims 72-74, the density is measured (column 11, lines 45-47) by monitoring the wave characteristics using Lamb-wave sensors (column 11, lines 39-42).

8. With respect to claim 75, detection signals may be processed and stored by integrated microelectronic devices so that result interpretation and control mechanisms which may utilize feedback can be integrally contained (column 4, lines 40-45).

9. With respect to claim 76, Northrup et al teach a power source/control system (fig.1, column 6, lines 53-63) for controlling the reaction, either by inductive coupling, capacitive coupling, or by electromagnetic coupling. Detection signals may be processed and stored by integrated microelectronic devices so that result interpretation and control mechanisms which may utilize feedback can be integrally contained (column 4, lines 40-45).

10. With respect to claim 77-78, the transducer produces Lamb waves with frequencies from 1 to 200 MHz (column 11, lines 3-10).

Response to Arguments

11. Applicant's arguments with respect to claims 70-79 have been considered but are moot in view of the new ground(s) of rejection.

12. The following arguments, however, are addressed:

13. Applicant argues that Delannoy et al do not teach measuring a parameter of ultrasound and merely measures the amount of radiant energy. While it is acknowledged that Delannoy et al teach the measurement of radiant energy, it should be noted that the radiant energy refers to radiofrequency waves, microwave radiation, or ultrasound waves (column 8, lines 10-14).

Therefore, applicant's arguments are not persuasive.

14. This is applicable also to applicant's argument that Delannoy et al only teach the control of radiant energy. Since radiant energy refers to ultrasound, applicant's arguments are not persuasive.

15. Applicant's arguments regarding that the prior art does not teach a central processing unit responsive to signals from a first and second sensor to regulate the ultrasound generator is not persuasive either. Specifically Delannoy et al teach that the MRI probes include a

Art Unit: 1641

tuning/matching circuit and a radiofrequency coil that provide information which permits the control of the amount of radiant energy (such as ultrasound) transmitted by the HT applicator (column 7, lines 40-47).

Furthermore, the limitation that the CPU adjusts a frequency or an intensity of said ultrasound in response to signals from the first and second sensors to regulate the ultrasound generator and adjusts a frequency or intensity of ultrasound in response to the signals from the first and second sensors is regarded as a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).

Conclusion

16. No claims are allowed.

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

18. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

Art Unit: 1641


will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson Yang whose telephone number is (571) 272-0826. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long V. Le can be reached on (571)272-0823. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nelson Yang
Patent Examiner
Art Unit 1641


LONG V. LE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600
08/19/05